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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,040	09/29/2003	Durga Prasad Malladi	030245	2580
23596 7590 09/17/2009 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121				
EXAMINER				
NGUYEN, KHAI MINH				
ART UNIT		PAPER NUMBER		
2617				
NOTIFICATION DATE		DELIVERY MODE		
09/17/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/674,040

**Applicant(s)**

MALLADI ET AL.

**Examiner**

KHAI M. NGUYEN

**Art Unit**

2617

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4, 10-12, 14-18, 20-30 and 32-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4, 21, 33 and 39 is/are allowed.
- 6) ☒ Claim(s) 10-12, 14-18, 20, 22-30, 32, 34-38, and 40-54 is/are rejected.
- 7) ☒ Claim(s) 55-57 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-894)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5/21/2009
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments with respect to claims 4, 10-12, 14-18, 20-30, 32-57 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10-12, 14-18, 20, 22-30, 32, 34-38, and 40-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jung (U.S.Pat-6049716) in view of Pussinen (U.S.Pat-6532363).

Regarding claim 10, Jung teaches a mobile station configured to operate in a wireless communication system comprising:

a processing subsystem is configured (col.2, line 42 to col.3, line 3) to set a transmission parameter (number BS) comprising a parameter size to first value (col.7, lines 26-33) or second value (col.5, lines 63-67) for the transceiver subsystem in response to detecting that the mobile station is entering (fig.6, S7, col.7, lines 26-33) or leaving soft handoff; and

Jung fails to specifically disclose the transmission parameter comprises a frame size.

However, Pussinen teaches the transmission parameter comprises a frame size (col.7, lines 11-45 (message type, message length)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Pussinen to Jung to reduce for loading of communication system.

Regarding claim 11, Jung and Pussinen further teach a mobile station as recited in claim 10, wherein the processing subsystem is configured to detect that the mobile station is entering or leaving soft handoff based upon a received handoff direction message (HDM) (see Jung, col.2, lines 16-65).

Regarding claim 12, Jung and Pussinen further teach a mobile station as recited in claim 11, wherein the processing subsystem is configured to set the parameter to a first value (col.5, lines 26-37) if the HDM directs the mobile station to enter soft handoff (see Jung, col.7, lines 26-33), and to set the parameter to a second value (col.5, lines 63-67) if the HDM directs the mobile station to leave soft handoff (col.5, lines 35-67 (handoff)).

Pussinen further teaches a frame size (col.7, lines 11-45 (message type, message length)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Pussinen to Jung to reduce for loading of communication system.

Regarding claim 14 is rejected with the same reasons set forth in claim 15.

Regarding claim 15, Jung teaches a mobile station configured to operate in a wireless communication system comprising:

a processing subsystem (col.2, line 42 to col.3, line 3); and

a transceiver subsystem (col.2, line 42 to col.3, line 3);

wherein the processing subsystem is configured to set a transmission parameter for the transceiver subsystem in response to detecting that the mobile station is entering or leaving soft handoff (col.5, lines 35-67), to detect that the mobile station is entering or leaving soft handoff based upon a received handoff direction message (HDM) (col.5, lines 44-67), to set the transmission parameter (adds cell D) to a first value if the HDM directs the mobile station to enter soft handoff (fig.6, S7, col.7, lines 26-33), and set the transmission parameter (col.5, lines 63-67) to a second value if the HDM directs the mobile station to leave soft handoff (col.5, lines 35-67 (handoff)),

Jung fails to specifically disclose wherein the transmission parameter comprises a frame size, and wherein the first size value is greater than the second value.

However, Pussinen teaches wherein the transmission parameter comprises a frame size (col.7, lines 11-45 (message type, message length)), and wherein the first size value is greater than the second value (col.7, lines 11-45).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Pussinen to Jung to reduce for loading of communication system.

Regarding claim 16, Jung and Pussinen further teach a mobile station as recited in claim 10, wherein the transceiver subsystem is configured measure a pilot signal strength for each of one or more base stations (see Jung, col.2, lines 16-65) and to periodically (see Jung, col.3, lines 22-24) transmitting transmit one or more pilot strength measurement messages to a network connected to the base stations (see Jung, col.2, lines 16-65).

Regarding claim 17, Jung and Pussinen further teach a mobile station as recited in claim 11, wherein the processing subsystem is configured to send a handoff completion message after receiving the HDM (see Jung, fig.6, col.7, lines 11-44).

Regarding claim 18, Jung teaches a method implemented in a wireless communication system comprising:

detecting a mobile station entering or leaving soft handoff (col.5, lines 35-67);  
and

modifying a transmission parameter (adds cell D) for the mobile station in response detecting the mobile station entering (fig.6, S7, col.7, lines 26-33) or leaving soft handoff, wherein if the mobile station is directed to entering soft handoff (col.5, lines 35-67 (more than three BSs)), the parameter is set to a first value (col.7, lines 26-33) and wherein if the mobile station is directed to leaving soft handoff (col.5, lines 35-67 (handoff)), the parameter is set to a second value (col.5, lines 63-67).

Jung fails to specifically disclose the transmission parameter comprises a frame size.

However, Pussinen teaches the transmission parameter comprises a frame size (col.7, lines 11-45 (message type, message length)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Pussinen to Jung to reduce for loading of communication system.

Regarding claim 20 is rejected with the same reasons set forth in claim 15.

Regarding claim 22, Jung and Pussinen further teach a method as recited in claim 18, further comprising the mobile station measuring a pilot signal strength for each of one or more base stations (see Jung, col.2, lines 16-65) and periodically transmitting one or more pilot strength measurement messages to a network (see Jung, col.2, lines 16-65).

Regarding claim 23, Jung and Pussinen further teach a method as recited in claim 22, wherein detecting the mobile station entering or leaving soft handoff comprises identifying a change in a number of base stations in an active set for the mobile station based on the pilot strength measurement messages (see Jung, col.5, lines 35-67).

Regarding claim 24, Jung and Pussinen further teach a method as recited in claim 23, further comprising sending a handoff direction message (HDM) from the network to the mobile station in response to detecting the change in the number of base stations in an the active set (see Jung, fig.6, col.5, lines 35-67).

Regarding claim 25 is rejected with the same reasons set forth in claim 8.

Regarding claim 26 is rejected with the same reasons set forth in claim 9.

Regarding claim 27, Jung teaches a method implemented in a mobile station, comprising:

detecting that the mobile station is entering or leaving soft handoff (col.5, lines 35-67);

if the mobile station is entering soft handoff (fig.6, S7, col.7, lines 26-33), setting a transmission parameter to a first value (col.5, lines 35-67 (more than three BSs)); and if the mobile station is leaving soft handoff (col.5, lines 35-67 (handoff)), setting the transmission parameter to a second value (col.5, lines 63-67);

Jung fails to specifically disclose wherein the transmission parameter comprises frame size.

However, Pussinen teaches wherein the transmission parameter comprises frame size (col.7, lines 11-45 (message type, message length)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Pussinen to Jung to reduce for loading of communication system.

Regarding claim 28, Jung and Pussinen further teach a method as recited in claim 27, wherein detecting that the mobile station is entering or leaving soft handoff comprises receiving a handoff direction message (HDM) from a network (see Jung, col.2, lines 16-65).



Regarding claim 29, Jung and Pussinen further teach a method as recited in claim 27, further comprising measuring a pilot signal strength for each of one or more base stations (see Jung, col.2, lines 16-65) and periodically transmitting one or more pilot strength measurement messages to a first one of the base stations (see Jung, col.2, lines 16-65).

Regarding claim 30 is rejected with the same reasons set forth in claim 9.

Regarding claim 32 is rejected with the same reasons set forth in claim 3.

Regarding claims 34 and 53, Jung teaches an apparatus for wireless communication, comprising:

means for detecting that a mobile station is entering or leaving soft handoff (col.5, lines 35-67);

means for modifying a transmission parameter (adds cell D) for the mobile station in response to detecting the mobile station entering soft handoff (fig.6, S7, col.7, lines 26-33) or leaving soft handoff, wherein if the mobile station is detected entering soft handoff (col.5, lines 35-67 (more than three BSs)), the parameter is set to a first value (col.7, lines 26-33) and wherein if the mobile station is detected leaving soft handoff (col.5, lines 35-67 (handoff)), the parameter is set to a second value (col.5, lines 63-67).

Jung fails to specifically disclose the transmission parameter comprises a frame size.

However, Pussinen teaches the transmission parameter comprises a frame size (col.7, lines 11-45 (message type, message length)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Pussinen to Jung to reduce for loading of communication system.

Regarding claim 35 is rejected with the same reasons set forth in claim 28.

Regarding claim 36 is rejected with the same reasons set forth in claim 30.

Regarding claim 37 is rejected with the same reasons set forth in claim 29.

Regarding claim 38 is rejected with the same reasons set forth in claim 3.

Regarding claim 40, Jung and Pussinen further teach the apparatus of claim 34, further comprising:

Pussinen further teaches transmitting data on reverse link in accordance with the frame size (col.7, lines 11-45 (message type, message length)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Pussinen to Jung to reduce for loading of communication system.

Regarding claims 41 and 54, Jung teaches a processor-readable medium including instructions stored thereon, comprising:

instructions for detecting that a mobile station is entering or leaving soft handoff (col.5, lines 35-67);

instructions for modifying a transmission parameter (adds cell D) for the mobile station in response to detecting the mobile station entering (fig.6, S7, col.7, lines 26-33) or leaving soft handoff; and instructions for setting a transmission parameter to a first value if the mobile station is entering soft handoff (col.5, lines 35-67 (more than three BSs)); and instructions for setting the transmission parameter to a second value if the mobile station is leaving soft handoff (col.5, lines 63-67 (handoff))

Jung fails to specifically disclose the transmission parameter comprising a frame size.

Jung fails to specifically disclose the transmission parameter comprises a frame size.

However, Pussinen teaches the transmission parameter comprises a frame size (col.7, lines 11-45 (message type, message length)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Pussinen to Jung to reduce for loading of communication system.

Regarding claim 42, Jung and Pussinen further teach the processor-readable medium of claim 41, further comprising:

instructions for receiving a handoff direction message (HDM) from a network (see Jung, col.2, lines 16-65).

Regarding claim 43, Jung and Pussinen further teach the processor-readable medium of claim 42, further comprising:

instructions for sending a handoff completion message to the network after receiving the HDM (see Jung, fig.6, col.7, lines 11-44).

Regarding claim 44, Jung and Pussinen further teach the processor-readable medium of claim 41, further comprising:

instructions for obtaining a pilot signal strength for each of one or more base stations (see Jung, col.2, lines 16-65); and instructions for periodically sending one or more pilot strength measurement messages to a first one of the base stations (see Jung, col.2, lines 16-65).

Regarding claim 45 is rejected with the same reasons set forth in claim 15.

Regarding claim 46 is rejected with the same reasons set forth in claim 40.

Regarding claim 47 is rejected with the same reasons set forth in claim 4.

Regarding claim 48 is rejected with the same reasons set forth in claim 4.

Regarding claim 49 is rejected with the same reasons set forth in claim 15.

4. Claims 50-52 are rejected under 35 U.S.C.103(a) as being unpatentable over Jung (U.S.Pat-6049716), in view of Pussinen (U.S.Pat-6532363), and further in view of Antonio et al. (U.S.Pat-6208858).

Regarding claim 50, Jung and Pussinen further teach a method as recited in claim 27,

Jung and Pussinen fail to specifically disclose the data rates.

However, Antonio teaches the data rates (col.8, lines 38-47, and col.10, lines 5-15).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Antonio to Jung and Pussinen to reduce for loading of communication system.

Regarding claims 51 and 52, Jung, Pussinen, and Antonio further teach a method as recited in claim 50,

Pussinen further teaches the first value is less than the second value (col.7, lines 11-45 (based on the special cell message))

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Pussinen to Jung to reduce for loading of communication system.

Antonio teaches the data rates (col.8, lines 38-47, and col.10, lines 5-15).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Antonio to Jung and Pussinen to reduce for loading of communication system.

***Allowable Subject Matter***

5. Claims 55-57 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. Claims 4, 21, 33, and 39 are allowed.

Applicant's independent claims 4, 21, 33, and 39: The present in invention is directed to a wireless communication system, the independent claim identifies the patentably distinct feature "wherein the transmission parameter comprises a frame size, wherein if the mobile station is directed to enter soft handoff, the frame size is set to a first size and wherein if the mobile station is directed to leave soft handoff, the frame size is set to a second size, wherein the first size is greater than the second size, and wherein the first size is 10 ms and the second size is 2 ms". Applicant's independent claims 4, 15, 21 and 33 comprise a particular combination of elements, which is neither taught nor-suggested by prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submission should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAI M. NGUYEN whose telephone number is (571)272-7923. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent P. Harper can be reached on 571.272.7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VINCENT P. HARPER/  
Supervisory Patent Examiner, Art Unit 2617

/Khai M Nguyen/  
Examiner, Art Unit 2617

9/10/2009